

In re Application of:  
Short and Keller  
Application No.: 08/876,276  
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REMARKS

Claims 19-46 were pending prior to this response. By the present communication, claim 42 is cancelled without prejudice and claim 19 has been further amended to more particularly define Applicants' invention. The amendments add no new matter, the claim amendments being fully supported by the specification and original claims. Accordingly, claims 19-41, and 43-46 are currently pending.

Rejection Under 35 U.S.C. 102(b)

Applicants respectfully traverse the rejection of claims 19-21, 35, and 37 under 35 U.S.C. 102(b), as allegedly being anticipated by Abeijon, et. al. (*Proc. Natl. Acad. Sci. USA* 93:5963-5968, 1993; hereinafter "Abeijon"), is respectfully traversed. Applicants' invention method for identifying a bioactivity or biomolecule of interest using high throughput screening, as defined by amended claim 19, distinguishes over Abeijon by requiring:

- a) contacting a bioactive substrate that is fluorescent in the presence of the bioactivity or biomolecule of interest with a library containing a plurality of clones containing naturally occurring DNA from more than one organism;
- b) screening the library with a fluorescent analyzer that detects bioactive fluorescence, and
- c) identifying clones detected as positive for bioactive fluorescence, wherein fluorescence is indicative of naturally occurring DNA that encodes a bioactivity or biomolecule of interest."

By contrast, Abeijon is completely silent regarding a method for generating a library for identifying library clones that contain naturally occurring DNA from more than one organism encoding a naturally occurring bioactivity or biomolecule of interest. As the Examiner acknowledges, in the method of Abeijon, *K. lactis* mutant cells are transformed with wild-type *K. lactis* genomic DNA to create a library. The clones are then contacted with fluorescein

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isothiocyanate conjugated to *Grifonia simplicifolia* lectin and screened for cells that bind terminal N-acetylglucosamine (Office Action mailed 5/7/02, pages 2-3). Thus, the clones in the library disclosed by Abeijon contain a mixture of naturally occurring and mutant DNA such that the selected activity is not "naturally occurring". Moreover, the method disclosed by Abeijon results in detection of a target molecule having properties different than the wild type properties of *K. lactis*. Hence, the bioactivity encoded by the Abeijon clone is not "naturally occurring."

Moreover, Abeijon fails to suggest screening of naturally occurring DNA from more than one organism to locate those that encode a naturally occurring activity of interest. Abeijon was solely concerned with complementation of the genomic DNA of the mutant strain with genomic DNA from the wild-type organism to clone the gene encoding the Golgi transporter, thus confirming a hypothesis concerning the DNA responsible for an observed phenotype in the mutant strain. Because Abeijon's method was carefully controlled to result in a single outcome, (i.e., separation of clones in which complementation occurred from those in which complementation had not occurred), Abeijon fails to suggest the invention methods, as defined by amended claim 19, for fluorescence screening of naturally occurring DNA from more than one organism to identify a bioactivity or biomolecule of interest.

Therefore, Abeijon fails to teach each and every element of Applicants' method as defined by amended claim 19 as would be required to constitute anticipation under 35 U.S.C. 102(b). Accordingly, reconsideration and withdrawal of the rejection of claims 19-21, 35, and 37 under 35 USC § 102(b) are respectfully requested.

In view of the amendments and the above remarks, it is submitted that the claims are in condition for allowance and a notice to that effect is respectfully requested. The Examiner is invited to contact Applicants' undersigned representative if there are any questions relating to this application.

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The Commissioner is authorized to charge any fee (or credit any overpayment) to Deposit  
Acct. No. 50-1355.

Respectfully submitted,

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Lisa A. Haile, J.D., Ph.D.  
Reg. No. 38,347  
Telephone: (858) 677-1456  
Facsimile: (858) 677-1465

USPTO CUSTOMER NUMBER 28213  
GRAY CARY WARE & FREIDENRICH LLP  
4365 Executive Drive, Suite 1100  
San Diego, California 92121-2133

Gray Cary\GT\6349579.2  
104703-156676